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Managing PCC Batch Plants

Portland cement concrete (PCC) batch plants present many challenges to water pollution control on construction sites. The NPDES Caltrans Permit* requires management of storm water and non-storm water discharges from PCC batch plants on the Caltrans right of way, as well as those offsite that are directly related to construction activities. This bulletin reviews Caltrans requirements for managing all PCC batch plants.

This PCC batch plant is properly located away from drain inlets and other drainage systems.

Provide secondary containment for liquid materials such as silos of admixture.

Implement TC-1 or TC-3 to prevent tracking onto the Caltrans right of way or public roads.

SWPPP Requirements

The contractor must include appropriate Best Management Practices (BMPs) and a Sampling and Analysis Plan for PCC batch plants in the project Storm Water Pollution Prevention Plan (SWPPP), and then implement, inspect and maintain all practices as required.

The *Construction Site BMPs Manual* contains a number of practices that apply to PCC batch plants.

Plant Location

PCC plants should be located away from watercourses, drainage courses and drain inlets. The ideal location also minimizes the potential for storm water run-on to the site.

Materials Storage

Material Delivery and Storage (WM-1) should be implemented for all batch plants using concrete components or compounds. An effective strategy is to "cover and contain." That is, cover materials to prevent contact with storm water and contain runoff from storage areas to prevent discharge from the plant site.

Provide secondary containment for liquid materials. New requirements published in the Storm Water Quality Practice Guidelines (December 2001) are being incorporated into WM-1. These new requirements call for sufficient volume to contain precipitation from a 24-hour 25-year storm plus 10% of the aggregate volume of all containers or plus 100% of the largest container, whichever is greater.

- Protect stockpiles with cover and/or perimeter sediment barriers per Stockpile Management (WM-3). (See bulletin -Vol. 6, No. 2 for details.)
- Store bagged and boxed materials on pallets and cover on non-working days and prior to rain.
- Minimize stockpiles of demolished PCC by recycling them in a timely manner.
- Ensure that finer materials are not dispersed into the air during operations, such as unloading cement delivery trucks.
- Maintain adequate supplies of spill cleanup materials and train staff to respond to spills per Spill Prevention and Control (WM-4).

If onsite materials are not properly managed or protected, batch plants will be subject to sampling and analysis requirements as specified in the special provisions and SWPPP.

Equipment Maintenance

Equipment should be maintained to prevent fluid leaks and spills per Vehicle and Equipment Fueling (NS-9) and Vehicle and Equipment Maintenance (NS-10).

For mobile equipment, provide secondary containment, such as drip pans, to capture and contain leaks at storage locations. Leaks and spills of vehicle fluids should be cleaned up and disposed of properly.

Concrete trucks and other concrete-coated equipment are to be cleaned in accordance with Concrete Waste Management (WM-8) using designated washout areas.

Tracking Control

Trucks should not track PCC from plants onto the Caltrans right of way or onto public roads. Use appropriate practices from Stabilized Construction Entrance/ Exit (TC-1) and Entrance/Outlet Tire Wash (TC-3) to prevent tracking.

Inspection and Maintenance

The Resident Engineer should apply the same standards to onsite batch plants, as well as offsite batch plants specifically arranged for and provided for by Caltrans. Both should be inspected on a regular basis to ensure that BMPs are properly implemented and maintained.

STORM WATER HOME